



East Pond Algae Bloom (August 2004)

GOAL- Improve water clarity and summer recreation values

Algae Blooms - Major Problem in Numerous Developed Lakes

- Sources of watershed nutrients effectively reduced, but stored in pond sediments.
- Ponds turn pea-soup green in late summer - produce nuisance scums and odors.
- Seriously interferes with lake use, lake dependent businesses, property values.
- An excess of algae speeds up the lake aging process and can limit fish habitat.

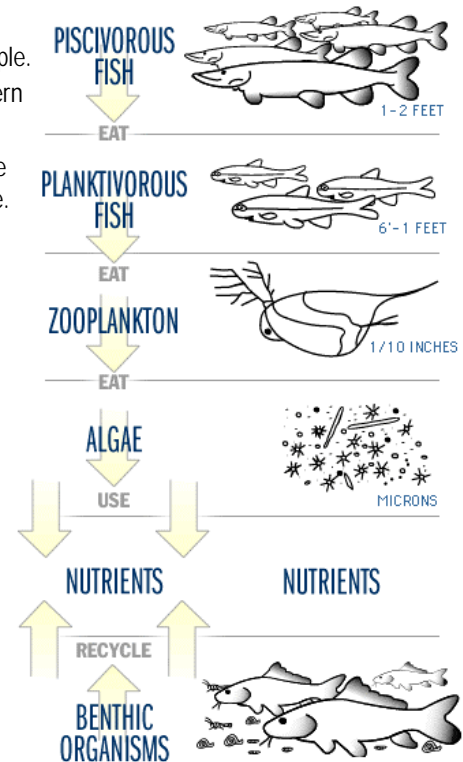
Biomanipulation (Fish Removal) Can be a Solution

- Biomanipulation is the alteration of biological communities - fish stocking, for example.
- Removal of perch-type fish has been successfully used in European and mid-western U.S. lakes to effectively reduce algal blooms and improve water clarity.
- In the food chain (see figure), reducing numbers of planktivorous fish (juvenile white perch) can encourage growth of zooplankton and enhance their consumption of algae.

Why Lake Biomanipulation?

- Existing overabundance of white perch overgrazing larger zooplankton
- Pilot project with possible application to other algae blooming lakes
- Other lake remediation options are expensive, uncertain, non-permitted
 - Can involve dredging and applying foreign or toxic substances
- Potential benefit of fish biomass reduction through permitted harvest
 - Relatively inexpensive and requires no toxic materials
 - Springtime harvest (trapping) by commercial interests
 - Reduced fish densities can result in larger individuals
- Potential fishery effects of fish biomass reduction
 - Reduced angling opportunities for small perch-type fishes
 - Possible reduction in available forage for larger predators?

Typical Lake Food Chain



From: <http://WaterOnTheWeb.org>. 2004

Ongoing Project Activities

First step is to understand existing relationships between plankton and fish

- University Maine graduate student is studying these complex relationships.
- DEP trapped white perch (April-May 2004) to estimate abundance.
- DEP & DIFW are capturing and tagging bass to evaluate growth rates.
 - Look for bass tags in the circled area (see picture)
 - Report tag numbers to DEP (287-7649) or DIFW (941-4381)
- DIFW is conducting ice fishing surveys to gather fish harvest data.
 - *Funded through the East Pond Association*
- Colby College has been monitoring water quality and lake geochemistry.
- Non-blooming nearby North Pond is being studied as a comparison lake.



Bass tagging to track population information
YOU CAN HELP - REPORT BASS TAG NUMBERS

Fish removal may begin in the spring of 2006 or 2007, pending results of studies and evaluations

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